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HOLLOWAY, JASON R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,172

Applicant(s)

MCDONALD ET AL.

Examiner

JASON HOLLOWAY

Art Unit

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2010.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
4a) Of the above claim(s) 4 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 5-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

The previous claim and specification objections are withdrawn in light of applicants amendments.

Claim Objections

1. Claim 5 is objected to because of the following informalities:

In claim 5, it is unclear why the "U-shaped" limitation is in parentheses.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The newly added limitations to claims 1, 14 and 18 include the following: "said thickness surrounding at least one said planar sheet element and said thickness terminating on the edge of said panels at or before the peripheral edge of one of at least one of said planar sheets element..." This limitation is indefinite because how can the thickness of the frame *surround* the planar sheet when it terminates on or before the edge of the sheet? Surrounding implies the frame completely covers the planar sheet which appears to be contradictory to what is claimed and the elements in the drawing figures. Claims 2-13, 15-17 and 19-24 depend from claims 1, 14 and 18 thus they carry

the same deficiency. accordingly, the claim will be examined as best understood under the assumption that the frame is not surrounding the planar sheets.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 5-10, 14-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum (5,136,822) in view of Russell (3,330,084) and further in view of Timmons (4,035,972).

Regarding claims 1 and 8, Blum teaches a modular construction system comprising a plurality of panels (wall modules 20), said panels having peripheral frame elements defining a top channel (at top channel plate 36), a bottom channel (at bottom channel plate 38), and opposite side channels (side channels are formed by sidewalls 32 of interior support columns 30 and are formed on each side of the wall) and a first planar sheet element (outside wall surface 22), and a second planar sheet element (inside wall surface 24), and an inner core region (region 26), said inner core region filled with an insulating material that connects said sheet elements to said frame and to one another (column 3 lines 25-36 teaches insulation filling), and further comprising:

an elongate bottom strut (bottom channel plate 38), said bottom strut received in said bottom channel (as illustrated in figure 2),

an elongate top strut (at top channel plate 36), said top strut received in said top channel (as illustrated in figure 2) and spanning said plurality of panels (see figure 1),
and

vertical tie means (tie rod 50), said vertical tie means positioned between two adjacent panels and capable of connecting said top strut (36) to said bottom strut (38) and restricting the movement of said top strut and bottom strut away from one another (as illustrated in figure 2).

Blum teaches the added claim limitations wherein the frame comprises a metallic substrate (the top and bottom plates are sheet metal) having an outwardly facing surface and inwardly facing surface and a thickness and said thickness surrounding at least one said planar sheet element (see figure 2) and the lateral sides of adjacent panels form a substantially continuous surface (see figure 1)

However, Blum fails to explicitly disclose the frame elements attached to each other at their respective opposite ends and the side channels face outwardly.

Russell teaches a wall panel construction having frame elements which are separate from the wall modules and surround the periphery of the wall panels which are attached to each other at their respective opposite ends (as illustrated in figures 1-2, 5 and 6 of Russell, horizontal and vertical frame elements 7 are attached to one another at the ends of the modules where the horizontal and vertical portions of the walls meet) and the side channels face outwardly (as illustrated in figure 3, all the edges of the wall modules are provided with notches 42 which are outwardly facing).

Therefore, from the teaching of Russell, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wall modules of Blum to include the teaching of framing members surrounding the periphery of the modules as taught by Russell in order to prevent the edges of the panels from chipping or breaking due to impact. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Blum with the teaching of providing an outwardly facing channel member as taught by Russell in order to allow the support columns 30 of Blum to be embedded within the panels and thus creating a more rigid wall.

The examiner notes that even though the combination of Blum and Russell does not say the insulating material is an adhesive, the examiner contends that any one of the materials mentioned in column 1 lines 64-68 of Blum would constitute an adhesive material. For instance, if polyurethane was used as the insulating material, the material would stick to either side of the inside of the wall modules when sprayed in between the walls and thus would be adhesively bonded to the walls. The examiner notes that the previous position is not being changed, it is being clarified since it appears the applicant has misunderstood the rejection to claim 1 in the previous Office Action.

The combination of Blum and Russell fails to explicitly disclose the thickness terminates on the edge of said panels at or before the peripheral edge of one of said planar sheet elements. Timmons teaches a panel joining apparatus which discloses just that (see figures 1 and 2 where caps 78 terminate at the peripheral edge of the planar sheets 12). Therefore, from the teaching of Timmons, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Blum and Russell to include caps that terminate at the edges of panels similar to that disclosed by Timmons in order to create a simpler connection which does not require the wrapping around of the top cap element, thus making for a simpler and more cost effective connection.

Regarding claim 2, Blum teaches the vertical tie means (tie rod 50) comprise elongate threaded rods (column 6 lines 47-52 teaches threaded tie rods).

Regarding claim 5, Blum teaches an axial section of said strut (36, 38) comprises a "U shaped" profile (as illustrated in figure 2, the struts comprise a general U shape).

Regarding claim 6, Blum teaches the second sheet is comprised of gypsum board (column 3 lines 22-24 teaches interior gypsum board).

Regarding claim 7, Blum teaches the first sheet can be comprised of stucco, masonite or other exterior building materials used in the industry, however, fails to explicitly disclose the use of cement board. Blum does teach the use of fiber cement for the interior modules. It would have been obvious to one of ordinary skill in the art to use cement board for the outside wall since it is a well known in the industry and would provide the proper characteristics for an outside environment.

Regarding claim 9, Blum teaches the bottom strut and said top strut are parallel with one another (as illustrated in figures 1-2 and 5-7, top and bottom struts 36 and 38 are parallel with each other).

Regarding claim 10, Blum teaches the panels (22, 24) are polygonal (as illustrated in figure 1, the panels are rectangular).

Regarding claim 14, Blum teaches a method of making a wall comprising securing an elongate strut (bottom channel plate 38) on a base element (floor 15), positioning a plurality panels (22, 24) having channels on a bottom surface on said elongate strut (38; as illustrated in figure 2), placing a top strut (36) in a top channel provided in each said panel (as illustrated in figure 2), positioning a tie rod (50) between said first strut in a passage formed between adjacent and abutting panels (a passage between panels is formed by support column 30 of figure 1), engaging receiving and securing means in the bottom strut and securing the top of said tie rod thereby preventing said top strut from movement with respect to said bottom strut (the engagement and securing means is provided by the threaded tie rod 50 of figure 2 which is secured by nut 52). The examiner notes the amended limitations of claim 14 are rejected under the same rationale as claim 1 above.

Regarding claim 15, Blum teaches the panels comprise a laminate construction including a first planar sheet (one of sheets 22 or 24), a core region filled with an insulating component (column 3 lines 25-36 teaches insulation filling) and a second planar sheet. The examiner contends the insulation in the core region is as adhesive for the same reasons set forth in claim 1.

Regarding claim 16, Blum teaches the base element comprises a floor (floor 15 of figure 1).

Regarding claim 17, Blum teaches a corner joint 23 connects two wall panels together (as illustrated in figure 1).

However, Blum fails to explicitly disclose first setting a corner panel to the base element, wherein the corner panel extends in more than one plane.

Russell teaches a wall panel corner construction in which a corner panel (special corner panel 47), wherein the corner panel extends in more than one plane (as illustrated in figure 5; column 3 line 69 to column 4 line 10 teaches the corner panel 47 connected to a foundation). Although Russell does not explicitly disclose the corner member 47 is attached to the base element first, it would have been an obvious design choice to one of ordinary skill in the art to place the corner panel first in order for two main panel sections to be set simultaneously.

Therefore, from the teaching of Russell, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wall panel of Blum to include a devoted corner panel as taught by Russell in order to provide a stronger connection.

Regarding claim 18, the combination of Blum and Russell teaches a modular panel comprising a plurality of frame elements (via frames 7 of Russell), a first planar sheet (22), a second planar sheet (24) and a core region (26) filled with an insulation material (column 3 lines 25-36 of Blum teaches insulation filling), said frame elements comprising a top member, a bottom member and two lateral members (via the frames 7 of Russell in figures 1, 3, 5 and 6), wherein said top and bottom members have abutting surfaces that are perpendicular to the lateral sides of said panel (frames 7 as illustrated

in figures 1, 3, 5 and 6 of Russell), said members further comprising channels, said channels running along the length of each member (figures 1, 2 and 4 illustrate channels 42 which run the length of the members) said channels on each member intersecting with a channel on adjacent members (Russell teaches the channels on each member intersect with a channel on an adjacent member; as illustrated in figure 6, horizontal and vertical channel members intersect with one another). The examiner contends the insulation in the core region is as adhesive for the same reasons set forth in claim 1.

Regarding claim 19, the combination of Blum and Russell teaches the channel is positioned in the center of said abutting surfaces (the channel 42 of Russell is located in the center of the abutting frame members).

Regarding claim 20, the combination of Blum and Russell teaches the channel is offset from the center of said abutting surfaces (as illustrated in figures 1 and 2 of Blum, the channels formed at the top channel plate are positioned offset from center. The examiner contends that the combination of Blum and Russell could be formed to create the offset channel as disclosed by Blum. The examiner further notes it would be obvious to one of ordinary skill in the art to offset the channel since doing so would require only minimal design change).

Regarding claim 24, Blum teaches an elongate foam sleeve (a foam sleeve is formed at the central area 40 of the top channel plate 36, since the core 26 is made of a polyurethane foam insulation), said sleeve having means to receive said tie rods (as illustrated in figure 2, the sleeve at the central area 30 receives the tie rod 50) and said

sleeve adapted to fit and be engaged by said lateral channel (30) on said panels (as illustrated in figures 1 and 2 the support columns 30 engage the sleeve portion since the tie rods are disposed within the support columns).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blum (5,136,822) in view of Russell (3,330,084) in view of Timmons (4,035,972) and further in view of Cornett, Sr. et al. (6,161,339)

Regarding claim 3, Blum teaches vertical tie means comprise threaded rods in tension (see claim 2 above).

However, Blum fails to explicitly disclose the vertical tie means is wire in tension.

Cornett teaches a tensioning means tensioning means in a structural tie down apparatus comprising wire rope tensioner (60 of figure 1).

Therefore, from the teaching of Cornett, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the threaded rod tensioning means of Blum with the teaching of wire tensioning means as disclosed by Cornett in order to provide tensioning means which would not deform plastically under bending stress.

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum (5,136,822) in view of Russell (3,330,084) in view of Timmons (4,035,972) and further in view of Bertheaume et al. (6,591,556).

Regarding claim 11, Blum teaches the bottom and top struts are parallel to one another. However, Blum fails to explicitly disclose the top and bottom strut could be configured in a non-parallel manner.

Bertheaume teaches a canopy assembly in which strut members are not parallel to one another (as illustrated in figures 1, 3 and 5).

Therefore, from the teaching of Bertheaume, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the channel plates of Blum to be configured in a non-parallel manner as taught by Bertheaume in order to provide a means of providing channel members for roof sections.

Regarding claim 12, the combination of Blum and Bertheaume teaches the panels are triangular (the panels 54 of figures 1, 3 and 5 of Bertheaume are triangular).

However, the combination of Blum and Bertheaume fails to explicitly disclose the panel members are trapezoidal.

It would have been an obvious matter of choice to one of ordinary skill in the art to have modified the shape of panels of the combination of Blum and Bertheaume since such a modification would have only involved a mere change in the shape of a component. Absent any persuasive evidence that a particular configuration of the claimed shape is significant, a change in shape is generally recognized as being within the level of ordinary skill in the art (In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)). Further, it would have been obvious to one of ordinary skill in the art to provide a trapezoidal panel for a trapezoidal roof.

8. Claims 13, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum (5,136,822) in view of Russell (3,330,084) in view of Timmons (4,035,972) and further in view of Prewer (4,028,855).

Regarding claim 13, the combination of Blum and Russell teaches opposite lateral sides of the frame of abutting panels are attached to one another (as illustrated in figure 1).

However, the combination of Blum and Russell fails to explicitly disclose a hook and loop fastening system, wherein said hook and loop fastening system is attached to opposite lateral sides of the frame of abutting panels.

Prewer teaches partition wall connections connected by a hook and loop fastener system (column 3 lines 34-50; as illustrated in figures 1-8).

Therefore, from the teaching of Prewer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the panel connections of the combination of Blum and Russell to include the hook and loop panel connections of Prewer in order to provide a stronger connection between panels while providing a simple means of detachment.

Regarding claims 21 and 22, the combination of Blum and Russell teaches the abutting surface comprises two planar sections (the edges of the wall panels 22 and 24 each have planar sections; as illustrated in figures 1-3 and 9).

However, the combination of Blum and Russell fails to explicitly disclose the abutting surface comprises a planar strip positioned adjacent to said channel and said panel further comprises a second planar strip, opposite said channel and parallel with

said abutting surface and offset from said abutting surface thereby comprising an offset side and said strips are in the same plane.

Prewer teaches partition wall connections connected by strips formed from hook and loop fasteners (column 3 lines 34-50; as illustrated in figures 1-8).

Therefore, from the teaching of Prewer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the panel connections of the combination of Blum and Russell to include the strips formed from the hook and loop panel connections of Prewer in order to provide a stronger connection between panels while providing a simple means of detachment. The Examiner would like to point out that it would have been obvious to provide the panels of Blum as modified by Prewer with two planar strips since Blum discloses two panel sections which would each require its own strip section.

Regarding claim 23, Blum teaches the offset side (formed at the top channel plate 36 of figures 1 and 2 of Blum) is positioned internal to said space (as illustrated in figure 1, one of the channels is disposed closest to the internal section of the wall), and is capable of receiving a tubular chase and wherein said chase is provided with an opening accessible from an interior lateral sidewall (the Examiner construes the channel formed is capable of receiving a tubular chase, thus meeting the limitations of the claim. Further, the Examiner would like to point out that it is widely well known in the art to provide a chase in wall panels to pass wiring in between walls. The examiner notes the prior art meets the new claim limitations since the walls of the prior art are capable of defining an interior space.

9. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liittschwager (6,485,800) in view of Blum (5,136,822).

Regarding claim 25, Liittschwager teaches a method of making a modular panel comprising,

cutting to create a plurality of frame members (column 3 lines 53-57 teach the frame members are trimmed to the required size), assembling a plurality of frame members together (frame members 17 as described in column 3 lines 59-68; the examiner construes the frame members are assembled together they form a rectangular shape and surround skin sheets),

placing a first and second planar sheet on a press (top and bottom sheets 14 and 16 are placed on a press comprising a caul as described in column 6 lines 17-22),

placing a second planar sheet on said frame member (column 6 lines 17-22 teaches the sheet members are adhered to the frame member; thus a top planar sheet is placed on the frame member),

wherein said first planar sheet, said frame and said top planar sheet, define an interior space (column 6 lines 23-25 teaches the panels with the frame define a cavity),

placing a top press member on said second planar sheet, wherein said top and said bottom press member maintain said first and second sheets a predetermined distance from one another (column 6 lines 17-22 teaches a each panel section includes a caul member which are pressed toward one another. The caul members in conjunction with the mold 30 keep the panels in properly registered locations),

injecting adhesive between said first and second sheets and into said interior space wherein said injection creates pressure within the interior space and said pressures exerts a force on the interior surfaces of the planar sheets and frame member (column 6 lines 23-33 teaches a foam adhesive is pumped in between panels, the foam of Liittschwager exerts force on the interior surfaces of the planar members since the foam is in contact with the interior surfaces).

However, Liittschwager fails to explicitly disclose the frame members have channels running along their respective lengths.

Blum teaches building panels having frame members (channel plates 36 and 38 and support column 30) which include channels running along their respective lengths (as illustrated in figures 1 and 3, all the frame members have channel sections).

Therefore, from the teaching of Blum, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify panels of Liittschwager to include channels located in the frame members as taught by Blum in order to provide a space in which to run electrical wiring.

Regarding claim 26, the combination of Liittschwager and Blum teaches the adhesive comprises polyurethane foam (Liittschwager teaches urethane foam adhesive column 4 lines 12-18 of Liittschwager teaches urethane foam adhesive; Blum also teaches cavities filled with polyurethane foam).

Response to Arguments

10. Applicant's arguments with respect to the newly added limitations to claims 1, 14 and 18 have been considered but are moot in view of the new grounds of rejection.

11. Regarding applicants argument on the remarks page 10 first full paragraph that Blum does not teach a top strut connected to a bottom strut, the examiner respectfully disagrees and points to figure 2 of Blum which illustrates just that.
12. Regarding applicants argument on the remarks page 10 second full paragraph, the examiner respectfully disagrees as these limitations are noted in the rejection to claim 1. The applicants argument is not clear as to why Blum does not teach these features.
13. Regarding applicant's arguments to claims 1, 8, 15 and 18 that Blum fails to disclose a panel having an inner core filled with an adhesive the examiner respectfully disagrees. The examiner maintains the stance that, as noted in the rejection to claims 1 and 8 above, if polyurethane was used as the insulating material, the material would stick to either side of the inside of the wall modules when sprayed in between the walls and thus would be adhesively bonded to the walls. This is a reasonable interpretation of a polyurethane foam adhesive. If the claimed foam polyurethane can be an adhesive, so can the prior art's polyurethane foam.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached 892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON HOLLOWAY whose telephone number is (571) 270-5786. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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